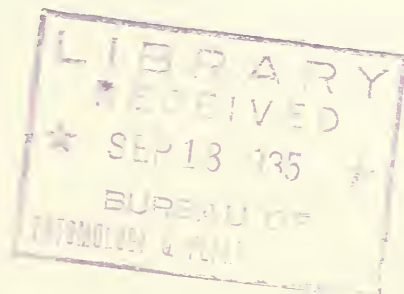


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THE INSECT PEST SURVEY  
BULLETIN



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Volume 15

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Number 7

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BUREAU OF  
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# INSECT PEST SURVEY BULLETIN

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## THE MORE IMPORTANT RECORDS FOR AUGUST 1935

During the latter part of July and the early part of August very heavy outbreaks of cutworms were reported from Michigan and Maine.

Serious damage was occasioned by the fall armyworm in the South Atlantic States and the Gulf region.

The green June beetle was reported from Delaware and Georgia, in the East Central States, and in New Mexico.

The green stink bug damaged a wide variety of plants in New Mexico and California.

Common red spiders were quite generally reported from the Gulf northward to Nebraska and also on the Pacific Coast.

Heavy hessian fly populations are present over a wide area from southeastern Kansas to central Pennsylvania.

In the East Central States the weather was adverse to the development of large populations of chinch bugs. In the West Central and the southern part of the North Central States the weather has been very favorable to this insect.

The report in the last number of this bulletin of the finding of alfalfa weevil in Mendocino County, Calif., was a mistake.

Plum curculios of the second brood were reported as very scarce in the Middle Atlantic and South Atlantic States.

A further report on the cherry scale in California, in which State it was found for the first time last year, appears in this number of the bulletin.

Blister beetles were quite generally prevalent and are doing considerable damage over the greater part of the country east of the Rockies.

Heavy infestations of the Mexican bean beetle were reported from practically its entire known range. It extended its range northward in Michigan and westward in Tennessee.

The squash bug was reported as unusually abundant and destructive from Indiana and Nebraska southwestward to Kansas and New Mexico.

Boll weevil infestations were generally heavy throughout the Cotton Belt, being particularly troublesome in the South Atlantic States.

The cotton leaf worm was very abundant and in many places quite destructive throughout the Cotton Belt, and moths flew northward earlier than usual. In Maine a moth was collected on August 6 and in Michigan on August 23.

Boll worm infestation of cotton was generally light.

Cotton aphid infestations were reported throughout the Cotton Belt.

Very heavy damage by the cotton flea hopper was reported from Oklahoma and Texas.

Bagworms were attracting unusual attention over the greater part of the country, reports having been received from Delaware to North Carolina, westward to Illinois, and southward to Texas.

Well-established infestations of the white spruce sawfly, a European pest, have been located over a considerable area in Maine, New Hampshire, and Vermont.

The larch sawfly has been discovered in northern Montana and threatens the larch stands in the upper Rocky Mountain region. This pest has not been recorded previously west of the Mississippi in the United States.

Very heavy damage to dahlias by the sunflower weevil (Rhodobaenus tredecimpunctatus Ill.) was reported from Illinois.

Unusual numbers of saddle-back caterpillars were observed in Ohio and Indiana, and reports of injury from the sting of these caterpillars were very numerous.

Reports of the occurrence of the black widow spider were very frequently received during the month in the South Atlantic, East Central, and North Central States. This spider was also reported from the Great Basin.

Up to the end of July four cases of Rocky Mountain spotted fever were reported from the State of Iowa.



THE MORE IMPORTANT ENTOMOLOGICAL FEATURES IN CANADA  
FOR JULY AND AUGUST 1935

Cool, wet weather in June and heavy rains in early July in Manitoba and Saskatchewan resulted in irregular and retarded hatching and slow development of grasshoppers, and in reduced crop damage. Organized control efforts, involving the widespread use of poisoned bait, were continued in the infested areas throughout the Western Provinces. In Manitoba the disease Empusa grylli was reported to be causing high mortality among the roadside and two-striped grasshoppers, and had appeared in areas in Saskatchewan where rains had been frequent. Crop damage has been comparatively light in Manitoba and Saskatchewan, except in the south-central part and local areas of the latter Province. Losses were occurring in some sections of southern Alberta, where they were accentuated by drought. Winged adults were becoming conspicuous in parts of the Prairie Provinces by the end of July. No extensive migrations have been reported. Egg laying was general by mid-August, and in the Red River Valley, Manitoba, adults were abundant enough to deposit sufficient eggs to create a menace in 1936. Central Manitoba was comparatively free of the insects. In British Columbia, grasshoppers were reported to be increasing on the ranges in the Kamloops area, and in the Cariboo district.

The outbreak of the pale western cutworm was fairly widespread in Saskatchewan and Alberta, but severe damage occurred in only a few areas. The largest area of general and severe infestation was in the Shackleton-Leader-Fox Valley area of Saskatchewan, extending for a short distance into Alberta. Severe local infestations also occurred in several areas of the drier districts of Alberta, centering on Lethbridge. Heavy rainfall in May and June in many areas has eliminated the pale western cutworm as an economic pest for 1936. Over a large part of the two Provinces, however, where rainfall was only sufficient to hold the insects in check, damage in 1936 may be expected to be about the same as this season.

The red-backed cutworm also caused crop damage locally in the Prairie Provinces.

Cutworms of several species were exceptionally abundant throughout a large part of the cultivated areas of the Provinces of eastern Canada, and in many places caused unusually severe damage to various field and garden crops. An outbreak of the spotted cutworm in southwestern Ontario resulted in the destruction of a large part of the sweetclover seed crop.

Second-year white grubs are prevalent in timothy and hoed crops in southern Quebec, and have caused destruction locally to sugar beets and strawberry plants in southern Ontario.

As during the last several seasons, blister beetles of several species are widespread in the Prairie Provinces, inflicting damage chiefly to leguminous shrubs and field and garden plants. A reduction in their numbers as compared with 1934 has been recorded in certain areas.

The wheat-stem sawfly is fairly abundant throughout southern Alberta, and general damage is expected. Injury by this species is generally severe in the infested areas of Saskatchewan, where it was accentuated by uneven ripening and hot weather, particularly in districts where the crop was not badly rusted. Light damage has been reported in Manitoba, but where the wheat is heavily rusted the larvae are starving and many are dying.

The sugar beet root maggot, which was first found causing damage to late-sown beets in the Barnwell district of Alberta in 1934, has again appeared in that section.

Adults of the beet webworm have been extremely numerous throughout western Manitoba and Saskatchewan and locally in southern Alberta.

Heavy flights of moths of the sod webworm (Crambus trisectus Walk.) occurred throughout southern Ontario. The larvae of this species had attacked pasture fields, corn, tobacco, and other crops. There was also general and widespread injury to lawns and golf courses by sod webworms in this section.

An unusually severe outbreak of the pea aphid developed in sections of Quebec and Ontario. Damage was less serious than was anticipated, probably as a result of the onset of weather conditions unfavourable to the aphids.

The European earwig appeared in exceedingly large numbers in the infested areas of southwestern British Columbia, and is proving destructive to garden crops in urban areas.

The black cherry aphid again appeared in outbreak form on sweet cherry trees, in the Niagara district of Ontario.

Injury by the codling moth in the Niagara district is much less severe than last year. The species is in evidence in some sections of the Annapolis Valley, Nova Scotia.

First-generation adults of the oriental fruit moth were found in all districts of the Niagara Peninsula, but were in smaller numbers than in former years. The species is much less abundant than in 1934 and injury is slight so far.

The gray-banded leaf roller is decreasing the apple crop prospects somewhat, in the Annapolis Valley, Nova Scotia.

As usual, the rose chafer appeared in outbreak form in various sandy sections of southern Ontario.

Adults of the grape leafhopper came through the winter in immense numbers in many vineyards in the Niagara district. Injury by these insects is severe in unsprayed and poorly sprayed vineyards.



Heavy infestations of the fall webworm were reported locally in Nova Scotia, Quebec, and southern Ontario. A more general outbreak occurred in Manitoba, and severe infestations occurred in various localities in Saskatchewan and Alberta.

Adults of the European spruce sawfly, in flight during the first week of June in central New Brunswick, were several times more numerous than in 1934. In the Gaspé Peninsula, Quebec, the infestation continues to be heavy and an increase in mortality of the trees is inevitable. The infestation has increased considerably in Kamouraska County, Quebec, and some of the trees are dying. The species has been found in Cumberland and Pictou Counties, Nova Scotia, but does not appear to be present yet in other parts of that Province.

The yellow-headed spruce sawfly caused extensive defoliation of spruce in northern Saskatchewan and northern Alberta. Indications are that it will eventually become generally distributed throughout the southern portion of these Provinces.

A severe outbreak of the mountain pine bark beetle, affecting lodgepole pine, has been found in the Kootenay National Park, British Columbia. It is believed that the outbreak has been spreading during the past 5 years.

Heavy infestations of the satin moth have been reported in a number of localities in Prince Edward Island; the Amherst and Springhill districts in Nova Scotia; and in Sackville, New Brunswick. The moths were emerging on July 13 in Nova Scotia. The species is reported to be comparatively scarce over the greater part of the area of infestation in British Columbia.

Reports of increased abundance of mosquitoes, as compared with previous years, have been received from New Brunswick, southern Quebec, sections of Ontario, and the Western Provinces. They were noted as extremely abundant and annoying throughout the three Prairie Provinces, and were reported to be an exceptionally severe pest in the Kamloops area and the Cariboo district of British Columbia.

## GENERAL FEEDERS

## GRASSHOPPERS (Acrididae)

Ohio. E. W. Mendenhall (August 19): Melanoplus femur-rubrum DeG., M. atlantis Riley, and Camnula pellucida Scudd. are quite destructive to nursery stock in some nurseries in Franklin County.

Illinois. W. P. Flint (August 22): There is some indication of grasshopper populations building up over most of central and north-central Illinois. In a few places grasshoppers are sufficiently abundant to justify poisoning.

Iowa. C. J. Drake (August 23): Grasshoppers are very abundant along the Missouri River, the heaviest infestation being south from Woodbury and Harrison Counties. Light and spotted infestations occur throughout the western half of the State. The species concerned are the lesser migratory and the differential (M. differentialis Thos.) and two-lined (M. bivittatus Say) grasshoppers. Some poisoned bait has been used as far east as Story and Wapello Counties. The grasshopper population is probably larger than it has been any time during the past 10 years.

North Dakota. F. D. Butcher (August 21): Grasshoppers have developed about as indicated in all parts of the State. Egg laying, although late, is taking place in all sections. Range-land species are very abundant in some western counties. C. pellucida continues to be dominant in northeastern counties. M. bivittatus seems to be slightly on the increase.

Kansas. H. R. Bryson (August 20): One report of grasshoppers being abundant at Clayton. M. differentialis and M. bivittatus are present in larger numbers than last year.

Nebraska. M. H. Swenk (July 15 to 31): Grasshoppers were reported damaging alfalfa in Johnson County on July 18. A garden in Furnas County was seriously damaged by July 23. Grasshoppers were present in Harlan County in sufficient numbers to seriously damage alfalfa and other crops. (August 15): Grasshoppers were damaging young alfalfa fields in southern Butler County between August 10 and 13. The differential grasshopper and the red-legged grasshopper were defoliating apple trees at Verdon, Richardson County, on August 13.

Oklahoma. C. F. Stiles (August 21): Several species of grasshoppers are doing some damage to cotton throughout the central and western parts of the State.

## CUTWORMS (Noctuidae)

Maine. H. B. Peirson (August): The greasy cutworm (Agrotis ypsilon Rott.) was unusually abundant at Bar Harbor from August 1 to 10.

Michigan. R. Hutson (August 15): Beginning about July 25 we had the worst infestation of cutworms on all sorts of crops that we have ever had. The principal species concerned was the variegated cutworm (Lycophotia margaritosa saucia Hbn.), accompanied, in many instances, by the true armyworm (Cirphis unipuncta Haw.). Oats had been lodged and in these oat fields large populations of cutworms accumulated and migrated with the armyworm. This outbreak is unusual in that usually by the 4th of July all the cutworm and armyworm infestations have been cleaned up through natural causes.

Nebraska. M. H. Swenk (July 31): The cotton cutworm (Prodenia ornithogalli Guen.) was reported severely attacking onion plants in Merrick, Dodge, and Buffalo Counties on July 19, 23, and 23, respectively.

#### ARMYWORM (Cirphis unipuncta Haw.)

Maine. H. B. Peirson (August): A. E. Brower reports that during July and August moths of the armyworm were far more abundant at Bar Harbor than during recent years.

Missouri. L. Haseman (August 24): Half-grown armyworms are now showing up in some areas in central Missouri.

#### FALL ARMYWORM (Laphygma frugiperda S. & A.)

North Carolina. C. H. Brannon (August 27): Injury to corn by the fall armyworm is severe and widespread over the State.

South Carolina. F. F. Bondy and C. F. Rainwater (August 3): Young corn severely injured at Florence.

Georgia. T. L. Bissell (August 6): Late corn has been severely injured by the fall armyworm in Spalding County. In a garden patch of about 500 stalks over 90 percent are infested. A report from Americus apparently involves this species.

Mississippi. C. Lyle (August 23): The fall armyworm was reported to be injuring late corn in the Brookhaven and Meridian districts.

Louisiana. W. E. Hinds (August 12): Grass worms have been moderately abundant and have done considerable damage in fields of corn and cane, but real damage has not been reported in more than a few instances.

#### VELVETBEAN CATERPILLAR (Anticarsia gemmatilis Hbn.)

Florida. A. N. Tissot (August 22): The velvetbean caterpillar has made its appearance. Practically mature larvae were found at Gainesville on August 15.



BERTHA ARMYWORM (Barathra configurata Walk.)

North Dakota. J. A. Munro (August 21): Bertha armyworm injury to flax and other crops in the central counties subsided during the early part of August, owing largely to disease taking a heavy toll of the worms.

A WHITE GRUB (Phyllophaga fusca Froel.)

Connecticut. W. E. Britton (August 22): Grubs ate roots of budded seedlings and probably not more than 10 percent of the apple and pear stocks had been injured. (Det. by R. B. Friend.)

A WHITE GRUB (Ochrosidia sp.)

Oregon. M. C. Lane and E. W. Jones (June 7): H. K. Dean, superintendent of the Unatilla branch station, reported serious damage by white grubs (Ochrosidia, probably reflexa Csy.) to grain and alfalfa in the Hermiston district. An examination on the above date showed a great number of larvae and some pupae in very sandy soils of this district. A number of different fields several miles apart were examined and the same kind of larvae were found in all. In many places good stands of first-year alfalfa have been killed. Wheat and rye were also being badly damaged. This pest has become noticeable only recently and may possibly become a serious pest on these very sandy soils.

GREEN JUNE BEETLE (Cotinis nitida L.)

Delaware. L. A. Stearns (July 31): C. nitida and Pelidnota punctata L. are present in abundance on grape and are actively feeding.

Georgia. O. I. Snapp (July 30): The green June beetle was unusually abundant at Fort Valley during July. Large numbers appeared about the time peaches ripened in some orchards and caused some damage by breaking the skin of the fruit and feeding on the juicy pulp.

Indiana. J. J. Davis (August 24): The green June beetle has been reported from many localities in southern Indiana. At Terre Haute on July 23 they were reported clustering on nectarines.

Kentucky. M. L. Didlake (August 23): Green June beetles abundant on fruit of peaches and tomatoes at Anchorage and Lexington.

New Mexico. J. N. Crisler (August 17): Adults of the green June beetle appeared in great numbers the latter part of July and have continued to do great damage to fruit.

JAPANESE BEETLE (Popillia japonica Newm.)

General. C. H. Hadley (August 27): Scouting during August has shown that the area of continuous spread of the Japanese beetle has moved farther



north and west than in recent years. To the north it moved to the tip of Lake Hopatcong in New Jersey and to the west to Lancaster, Pa., and Abingdon, Md. The southern spread in Delaware has not been great. Areas of extremely heavy infestation have been found in north-central and southwestern New Jersey, southeastern Pennsylvania, and northern Delaware. After August 15 the beetle population fell off rapidly and, although they may still be found at the close of the month, their numbers are greatly reduced.

A CHINCH BUG (Blissus hirtus Montd.)

New York. W. E. Blauvelt (August 3): Specimens received. Several lawns being injured by this pest at Saranac Lake.

Connecticut. B. H. Walden (August 16): About 1,200 square feet of creeping bentgrass at Westport all killed. Adjoining areas of mixed lawn grasses infested but not seriously injured. Insects abundant at Newtown.

GREEN STINK BUG (Acrosternum hilaris Say)

New Mexico. J. N. Crisler (August 17): The green stink bug appeared in Dona Ana and Eddy Counties in large numbers the last week of July and has continued to do heavy damage to fruit, garden, truck crops, and maize. The most severe damage was in the lower end of the Mesilla Valley. These insects became quite numerous in the cotton fields during the past week.

California. E. O. Essig (July 27): The green soldier or stink bug has done serious damage to a considerable acreage of commercial peach orchards in Fresno and Merced Counties in the early part of July.

C. S. Morely, Kern Co. Monthly News Bul. (August 5): Large green stink bugs are very numerous in Kern County and have injured some milo maize. These insects apparently attack the corn in the milk stage, giving the heads the appearance of wilting. All heads of corn past the milk stage are uninjured.

COMMON RED SPIDER (Tetranychus telarius L.)

General. H. Baker (August 22): Red spiders have caused severe injury to apples, raspberries, blackberries, and many trees and shrubs throughout northwestern Missouri, northeastern Kansas, and southeastern Nebraska. Injury became evident on raspberries and blackberries about the middle of July. Injury began to show on apples during the last part of July, with the peak of activity occurring during the period from about August 1 to 10. At the present time activity of the spiders has practically ceased.

Mississippi. C. Lyle (August 23): Inspector J. P. Kislanko reports that some pecan groves in Stone County are heavily infested with red

spider, probably due to hot dry weather earlier in the month. Injury to arborvitae was reported from the southwestern counties and also from Carrollton, Marks, and Winona by Plant Board inspectors.

Louisiana. W. E. Hinds (August 12): Cotton red spider is increasing in abundance in some fields at Baton Rouge.

Nebraska. M. H. Swenk (August 1 to 15): Severe damage by red spiders continued to be reported throughout the entire period, and extended to the north and west in the State. Severe damage, especially to elm and apple trees, was reported southeast of a line from Platte to Webster Counties. Damage to other fruit and shade trees was also frequently reported. The westernmost reports extended to a line from Antelope to Redwillow Counties.

Kansas. H. R. Bryson (August 22): The red spider continued to be the most injurious pest during the latter part of July and to date. Garden plants, flowers, fruit and shade trees, ornamental vines, and shrubbery have been attacked. Many plants either have been killed or have lost all of their leaves. Elm trees have suffered most. The infestation is known to be general over the State.

Oklahoma. C. F. Stiles (August 21): Red spiders are generally distributed over most of the evergreens in the central part of the State and are on a number of the shade trees. American elms on the courthouse square at Fairview have been partially defoliated. They seem to be on the increase throughout the State.

Washington. E. J. Newcomer (August 19): The common red spider has been extremely abundant on apples in the Yakima and Wenatchee Valleys.

California. C. S. Morley, Kern Co. Monthly News Bul. (August 5): The red spider mite is proving to be very injurious to shade trees, especially to sycamore, umbrella, and balm-of-Gilead.

## CEREAL AND FORAGE - CROP INSECTS

### WHEAT

#### HESSIAN FLY (Phytophaga destructor Say)

General. The results of a hessian fly survey are published in a supplement to No. 6 of the Insect Pest Survey Bulletin, 1935.

Iowa. C. J. Drake (August 23): Hessian flies are increasing in number throughout the winter wheat-growing sections of the State. The heaviest populations are in the southern and western parts of Iowa.

#### BLACK GRAIN-STEM SAWFLY (Trachelus tabidus Fab.)

Ohio. J. S. Houser (August 24): An analysis of the survey records shows



that in the 92 fields found to be infested by this insect, the average infestation was 37.4 percent. The highest infestation found in any one field was 72 percent. As reported last year, the outbreak is most intense in first- and second-tier counties bordering Pennsylvania about one-third of the distance across the State from the northern border. Rye is much less seriously damaged than wheat.

WHEAT STEM MAGGOT (Meromyza americana Fitch)

Iowa. C. J. Drake (August 23): The wheat stem maggot has done considerable damage throughout the southern half of the State.

CORN

CHINCH BUG (Blissus leucopterus Say)

Indiana. A. C. Cole, Jr. (August 21): Moderate numbers of first-brood adults are now generally dispersed through the cornfields in Tippecanoe County on foxtail grass and corn. They are gradually going to corn as the foxtail in small-grain stubble and corn becomes less satisfactory for food. Egg laying is dropping off and dissections indicate storage of fat rather than development of eggs in first-brood females, apparently in preparation for hibernation. First-instar to fourth-instar second-brood nymphs are now present in moderate numbers on foxtail and corn.

Illinois. W. P. Flint (August 22): During the past month heavy rains have continued over most of the area seriously infested with chinch bugs earlier in the spring. The infestation has been reduced to a point where very little damage will occur anywhere in the State. Continued rains will also probably reduce the second brood thereby greatly lessening the threat of damage next year.

Iowa. C. J. Drake (August 23): Weather conditions have been very favorable for the second generation of bugs, and heavy populations occur in 30 counties in the eastern part of the State. The heavy growth of foxtail and other summer grasses has provided plenty of succulent food. Unless weather conditions greatly change the situation the population in Iowa in 1936 will be much heavier than it was 2 years ago.

Missouri. L. Haseman (August 24): The month of August has been favorable for chinch bug development, but few complaints have been received.

Kansas. H. R. Bryson (August 23): Chinch bugs are not quite so scarce as last year.

CORN LEAF APHID (Aphis maidis Fitch)

Connecticut. N. Turner (August 21): Corn leaf aphid abundant but apparently causing little damage at Mt. Carmel.

Indiana. J. J. Davis (August 24): The corn leaf aphid was exceedingly abundant the first few days of August at Brookville and Crawfordsville. The infestations were accompanied by infections of soft rot. The aphids were apparently responsible for the rot.

#### CORN EAR WORM (Heliothis obsoleta Fab.)

Connecticut. N. Turner (August 21): Sweet corn harvested at Mt. Carmel early in August showed 30-percent infestation. Later corn is not yet infested.

North Carolina. R. W. Leiby (August 9): Usual damage to corn is evident, but in isolated spots 30-acre fields have been completely destroyed by the worms working in the throats of corn stalks.

Ohio. T. H. Parks (August 23): Sweet corn is not seriously infested now but ear worms are increasing. On the whole, there has been a reduction in population as compared with last year.

Indiana. E. V. Walter (August 21): The first egg for the season at La Fayette was found on sweet corn on July 9. Counts in field corn during the week of August 11 to 17 showed less than 1 percent of the ears infested at La Fayette and about 3 percent at Franklin. On August 20, 200 ears of sweet corn, 200 ears of popcorn, and 100 ears of field corn, full silk, were examined for eggs and none were found.

Illinois. W. P. Flint (August 22): The corn ear worm is very scarce in central and northern Illinois. Examinations to date show sweet corn running from 7 to 12 percent infested.

Iowa. C. J. Drake (August 23): The infestation is very heavy in a number of sweet-corn areas of the State, particularly in the southern and central parts. The infestation is not as heavy and is much more spotted than in 1934. Some of the sweet-corn growers are reporting heavy losses.

Missouri. L. Haseman (August 24): During the month there have been many complaints, and in central Missouri corn ears are badly infested.

North Dakota. J. A. Munro (August 21): Very few reports of injury to date.

Nebraska. M. H. Swenk (July 31): The corn ear worm was reported damaging corn plants in eastern Nebraska the latter half of July.

Kansas. H. R. Bryson (August 23): Very destructive to sweet corn and tomatoes.

Texas. A. J. Chapman (August 3): Infestation at Presidio much heavier than in any recent year. Causing serious damage in late-planted corn.

Utah. G. F. Knowlton (August 25): The corn ear worm is severely damaging tomato fruits and sweet corn at Moab and Castle Dale.



STALK BORER (Papaipema nebris nitela Guen.)

New Jersey. E. Kostal (August 5): During July the stalk borer was more abundant in Monmouth County than it has been for the past 4 years. Plants affected include corn, strawflower (Helichrysum), and zinnias.

Indiana. J. J. Davis (August 24): Full-grown stalk borers were common in corn at Marengo on August 8.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Vermont. H. L. Bailey (August 23): Moderately abundant, approaching extreme abundance, in Chittenden County. Second-, third-, and fourth-stage larvae found on August 6 at Essex. Moderately abundant at Randolph, Orange County.

Connecticut. N. Turner (August 21): The second generation is hatching and feeding marks show on late corn. Reports indicate that the first generation caused less damage than in 1934.

Wisconsin. E. L. Chambers (August 20): Scouting of counties along Lake Michigan in progress since July 15 has revealed light infestations of a few stalks each in a dozen localities in five counties formerly infested and cleaned up in 1933, indicating that new infestations are coming across the lake from Michigan.

ALFALFAALFALFA WEEVIL (Hypera postica Gyll.)

California. P. N. Annand (August 5): The occurrence of alfalfa weevil in Mendocino County, reported on page 280 of the Insect Pest Survey Bulletin August 1, was based on a misidentification. Mendocino County is not known to be infested.

GARDEN WEBWORM (Loxostege similalis Guen.)

Indiana. J. J. Davis (August 24): The garden or alfalfa webworm was seriously damaging young alfalfa at New Paris and Goshen on August 8 and 10, respectively. Reports indicate a rather general and scattered infestation in the northern counties.

Missouri. L. Haseman (August 24): The garden webworm has been injuring alfalfa, young corn, and garden crops during the month.

COWPEASCOWPEA CURCULIO (Chalcodermus aeneus Boh.)

Mississippi. G. L. Bond (August 23): The cowpea curculio was reported to be doing noticeable injury in southern Mississippi. Cowpeas grown in experimental plats at State College have also been seriously injured by this species.

## F R U I T I N S E C T S

APPLEFLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Nebraska. M. H. Swenk (July 31): From Chase and Saline Counties, on July 20 and 26, respectively, came reports of the flat-headed apple tree borer working in fruit trees.

Kansas. H. R. Bryson (August 22): The prolonged droughts of last season and the present one have weakened the vitality of nursery and shade trees and thus have favored the building up of an infestation of borers. The flat-headed apple tree borer has been reported killing apple trees at Herington, Willard, and Topeka.

LEAFHOPPERS (Cicadellidae)

Connecticut. P. Garman (August 22): The first generation of the white apple leafhopper (Typhlocyba pomaria McAtee) is from light to moderate in most orchards. The second generation is just beginning and control measures are necessary in some orchards.

Virginia. W. J. Schoene (August 23): The eggs of the white apple leafhopper began hatching in considerable numbers about August 20. The various species of Erythroneura have been observed in the central part of the State, E. obliqua Say and E. lawsoniana Bak. being the most common.

Missouri and Kansas. H. Baker (August 22): Leafhoppers have been unusually abundant in many orchards in northeastern Kansas and northwestern Missouri. The summer brood was present in greatest numbers during the latter half of July.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia. O. I. Snapp (August 20): Many crawlers set up on peach trees during the month and the infestation is now considerably heavier than that reported on July 3.

Wisconsin. E. L. Chambers (August 20): San Jose scale not widely distributed, even in southern Wisconsin. It is being picked up in a number of new villages and cities this summer.

PEACHPLUM CURCULIO (Conotrachelus nemophar Hbst.)

Delaware. L. A. Stearns (August 21): Mature second-brood grubs began to issue from peaches on August 15 but a small second brood is anticipated.

Georgia. O. I. Snapp (August 20): At Fort Valley first-generation adults supplied with apples and pears deposited very few eggs during the month. Jarrings in August revealed very few adults on trees in some orchards heavily infested earlier in the season, and it is believed that the beetles are now migrating toward places of hibernation.

Missouri. L. Haseman (August 24): The plum curculio was late in appearing in Missouri orchards and during the first 2 weeks in August considerable numbers of larvae were maturing in plums at Columbia.

Mississippi. N. D. Peets (August 23): The plum curculio seriously injured late peaches in southwestern Mississippi.

#### PEACH BORER (Aegeria exitiosa Say)

Georgia. O. I. Snapp (August 20): The peak of pupation at Fort Valley occurred during the past week. Field mice and rats are destroying many pupae in some orchards. In other orchards pigs have reduced the number of pupae.

Tennessee. G. M. Bentley (August 20): The peach-tree borer appears to be very plentiful in the commercial and home orchards in all sections of the State where paradichlorobenzene has not been used.

#### LESSER PEACH TREE BORER (Aegeria pictipes G. & B.)

Tennessee. G. M. Bentley (August 20): More prevalent this year than usual.

#### EUROPEAN EARWIG (Forficula auricularia L.)

Washington. E. J. Newcomer (August 19): During July several reports of the occurrence of the earwig in Yakima were received. In one instance the insects were doing considerable damage to ripening apricots and peaches on back-yard trees.

#### CHERRY

##### CHERRY FRUIT WORM (Laspeyresia packardi Zell.)

Washington. E. J. Newcomer (August 21): A lepidopterous larva was quite common in sour cherries during July in the vicinity of Kent, Wash. At least 10 percent of the cherries were infested. It is probably the same species reported from British Columbia, L. packardi Zell. It was later determined that this insect occurs throughout the region between Seattle and Tacoma.

##### CHERRY FRUIT FLY (Rhagoletis cingulata Loew)

Washington. E. J. Newcomer (August 19): A single maggot, probably this species, was found in a sour cherry near Kent on August 10.



Oregon. S. C. Jones (August): Larvae still present in late Duke cherries. Mature larvae first found on July 17.

#### CHERRY SCALE (Aspidiotus forbesi Johns.)

California. D. B. Mackie (August 1934): An infestation of the Forbes scale was discovered on Bosc pears at Mayhews, 5 miles west of Sacramento. The infestation is on old trees and apparently has been there for a few years. This is the first record of this scale in the State.

M. L. Jones (March 22, 1935): An infestation in a 10-acre planting near Sacramento was found on March 20. The infestation is in a pear orchard about 9 miles east of Sacramento on the varieties Bosc and Anjou. The infestation is light.

#### BLUEBERRY

##### BLUEBERRY MAGGOT (Rhagoletis pomonella Walsh)

New Jersey. E. Kostal (August 5): The blueberry maggot was found in native high-bush blueberries (Vaccinium corymbosum) on July 29 in Monmouth County. This fruit is usually heavily infested through the month of August in this locality.

#### PECAN

##### FALL WEBWORM (Hyphantria cunea Drury)

Florida. E. W. Berger and G. B. Merrill (August 22): The fall webworm has been observed at Melrose, principally on wild persimmon.

Tennessee. G. M. Bentley (August 20): In the forests and on isolated trees on farms they frequently make many webs, and in dim daylight the trees have the appearance of being covered with a white veil.

Mississippi. C. Lyle (August 23): Fall webworms are reported as generally distributed over the southwestern counties, while in other parts of the State they are not as numerous as they were earlier in the season and are even scarce in the Grenada district.

##### WALNUT CATERPILLAR (Datana integerrima G. & R.)

Florida. A. N. Tissot (August 22): The walnut defoliator is still abundant in some pecan orchards and has practically defoliated some trees.

Mississippi. G. L. Bond (August 23): The walnut caterpillar was abundant on pecan trees along the coast on August 19.

##### PECAN WEEVIL (Curculio caryae Horn)

Georgia. T. L. Bissell (August 3): The first emergence of the pecan weevil, one female, occurred on July 17 at Experiment. Eleven more have emerged.



## T R U C K - C R O P I N S E C T S

ASIATIC GARDEN BEETLE (Autoserica castanea Arrow)

Connecticut. N. Turner (August 21): The Asiatic garden beetle is reported to be very abundant in Greenwich and is causing serious damage to shrubbery. It is also reported by C. H. Hadley from Putnam, in the northeastern corner of Connecticut.

CARROT BEETLE (Ligyrus gibbosus DeG.)

Missouri. L. Haseman (August 24): The carrot beetles have continued to come to light during the month in considerable numbers.

Washington. M. C. Lane and H. P. Lanchester (August 23): A good many carrot beetles have been taken in a light trap at Walla Walla during the past few days.

## BLISTER BEETLES (Meloidae)

Maine. H. B. Peirson (August): On August 1 adults of the black blister beetle (Epicauta pennsylvanica DeG.) were stripping tomato and aster over a small area at Fort Fairfield.

Connecticut. W. E. Britton (August 22): Considerable damage by E. cinerea Forst. was reported on August 19.

Maryland. E. N. Cory (August 2): E. vittata Fab. is attacking tomato vines at Upper Marlboro.

Ohio. E. W. Mendenhall (August 5): The blister beetle (E. vittata) is quite numerous, feeding on potato plants in Clermont County.

Kentucky. M. L. Didlake (August 23): Margined blister beetles (E. cinerea marginata Fab.) are injuring dahlias at Prospect and Stamping Ground.

Missouri. L. Haseman (August 24): A few complaints have been received regarding blister beetles but at Columbia they have been unusually scarce.

Nebraska. M. H. Swenk (July 15-31): D. B. Whelan found potato fields being defoliated by Macrobasis segmentata Say on July 28, while both potatoes and alfalfa were found infested with E. maculata Say. A Dawes County correspondent reported blister beetles injuring potatoes and beets on July 31. Specimens of the blister beetle Lytta reticulata Say were sent in on July 20 from Morrill County, where they were injuring beans and other garden truck.

Kansas. H. R. Bryson (August 22): Blister beetles were reported to be very abundant at Brookville and Sedan.

Mississippi. C. Lyle (August 23): The margined blister beetle (E. cinerea

marginata) was reported injuring tomatoes at Prairie on August 7. E. lemniscata Fab. was reported from the northwestern counties and also from Meridian, where late tomatoes were severely injured.

Oklahoma. F. A. Fenton (August 20): Tomatoes were defoliated in several sections by blister beetles, chiefly a large gray species.

#### POTATO AND TOMATO

##### TOMATO WORMS (Phlegethontius spp.)

Indiana. J. J. Davis (August 24): The tomato worms P. quinquemaculata Haw. and P. sexta Johan. have been very abundant. In some fields near La. Fayette on August 1 about 20 percent of the green tomatoes were destroyed. This type of injury has been reported to be rather general in Indiana.

Missouri. L. Haseman (August 24): During the latter half of August there has been an increase of the tomato hornworm in central Missouri.

Nebraska. M. H. Swenk (July 15-31): The tomato hornworm (P. quinquemaculata) was reported injuring tomato plants in Lincoln County on July 23.

##### POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Vermont. H. L. Bailey (August 22): Potato flea beetles are very abundant throughout the State and have been the chief cause of premature dying off of plants in many potato fields.

Maryland. E. N. Cory (August 22): A heavy infestation observed on potatoes and buckwheat in Garrett County.

North Dakota. J. A. Munro (August 21): The potato flea beetle is reported to be abundant in Walsh County.

##### A POTATO FLEA BEETLE (Epitrix sp.)

California. J. C. Elmore (August 12): The potato flea beetle was very destructive to the lower leaves of producing tomato vines in Orange County. Actual commercial damage was not reported by tomato growers.

##### POTATO LEAFHOPPER (Empoasca fabae Harr.)

Vermont. H. L. Bailey (August 23): Potato leafhoppers are very abundant in most sections of the State.

Connecticut. N. Turner (August 21): Unsprayed potatoes are dead as a result of dry weather and tipburn.

Ohio. N. F. Howard (August 21): Potato leafhopper on beans is not injurious in central Ohio and it appears that multiplication was retarded by very wet weather.

Michigan. R. Hutson (August 15): The potato leafhopper is extremely abundant in dahlia plantings.

#### TARNISHED PLANT BUG (Lygus pratensis L.)

Indiana. J. J. Davis (August 24): The tarnished plant bug was damaging potatoes and celery the last of July and the first of August. Later in August they disappeared and apparently caused but little serious damage. This species was reported damaging gladiolus at Goshen on August 2.

#### A PLANT BUG (Phthia picta Drury)

Texas. F. L. Thomas (August 22): S. E. Jones, Winterhaven, records the first occurrence this year on July 13. Present in destructive numbers by the latter part of the month.

#### A PENTATOMID (Arvelius albobunctatus DeG.)

Texas. F. L. Thomas (August 22): First found on tomato during the latter part of July, causing all fruit that is punctured to be worthless.

### BEANS

#### MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Vermont. H. L. Bailey (August 23): The Mexican bean beetle is reported moderately abundant in Windsor County.

Connecticut. N. Turner (August 22): Moderately abundant on garden beans.

Delaware. L. A. Stearns (August 21): The Mexican bean beetle is more abundant on this date than in an average year.

North Carolina. C. H. Brannon (August 27): We have had a normal infestation throughout the State.

Ohio. N. F. Howard (August 21): The Mexican bean beetle continues to be injurious in central and southern Ohio, as well as in parts of the State where it is usually scarce.

H. C. Mason (August): Heavy rains have greatly retarded development in the South Point area.

T. H. Parks (August 23): More injury to garden beans this year than ever before.

Indiana. J. J. Davis (August 24): The Mexican bean beetle has been unusually abundant, reports coming from every section of the State.

Michigan. R. Hutson (August 15): The Mexican bean beetle is apparently extending its range this year, as we have had specimens from Big Rapids,



Manistee, Clare, and Fremont. The injury has been confined to snap beans, although a few specimens have been turned in as occurring on field beans.

Tennessee. G. M. Bentley (August 20): This pest has spread into new parts of Tennessee this year. Our extreme western counties of the State, bordering the Mississippi River, have not had this pest until this year. The beetles are abundant and doing damage in Obion County for the first time.

Alabama. N. F. Howard (August 22): H. L. Weatherby reports a rather heavy infestation at Brundidge, Pike County. This is below the main area of distribution and, together with the other isolated infestations in the far South, indicates a gradual spread into territory that has been considered unfavorable for the beetle.

Mississippi. L. J. Goodgame (August 23): The Mexican bean beetle has defoliated all the beans around Aberdeen and has spread westward.

Utah. G. F. Knowlton (August 25): Mexican bean beetles are still abundant and damaging lima beans at Moab. Two reports have been received to the effect that this insect is now present at Greenriver, Emery County.

#### WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon. B. G. Thompson (August): D. soror is more numerous on canning beans at Corvallis than for the past 2 or 3 years.

#### LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Georgia. O. I. Snapp (August 8): The lesser corn stalk borer ruined a large planting of snap beans at Fort Valley early in August.

Texas. F. L. Thomas (August 22): On July 11 E. lignosellus was injuring milo at San Angelo and also at Ballinger.

#### CABBAGE

##### HARLEQUIN BUG (Murgantia histrionica Hahn)

North Carolina. R. W. Leiby (August 23): Many reports are now being received of damage to collards and cabbage. These are the first complaints of damage for the season.

Mississippi. C. Lyle (August 23): The harlequin cabbage bug was reported from Hinds and Jefferson Davis Counties. Collard was the host plant mentioned.



CUCUMBERSSTRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Indiana. J. J. Davis (August 24): The striped cucumber beetle has been more abundant than usual and frequent rains have made the problem of control very difficult.

Ohio. B. J. Landis (July): During June and July the striped cucumber beetle was parasitized to a considerable extent by a small tachinid, probably Celatoria diabroticae Shim. Between June 11 and July 23 8 collections were made from squash plants, involving a total of 1,900 beetles, and 491 tachinid puparia were recovered from these collections. This is approximately 25.8 percent parasitization. Parasites continued to emerge for 23 days after collection.

Missouri. L. Haseman (August 24): Striped cucumber beetles have been very abundant on late cucurbits.

Mississippi. C. Lyle (August 23): The striped cucumber beetle has caused much damage to watermelons near Aberdeen by feeding on the outer surface, thus reducing their market value.

SQUASHSQUASH BUG (Anasa tristis DeG.)

Indiana. J. J. Davis (August 24): The squash bug was abundant and destructive at Goshen, Elkhart, and Terre Haute the last of July and early in August.

Missouri. L. Haseman (August 24): The squash bug has been very abundant and destructive during August.

Nebraska. M. H. Swenk (July 15-31): Squash bugs were reported from several counties in the eastern half of the State.

Kansas. H. R. Bryson (August 23): Squash bugs are very abundant wherever squashes or pumpkins are grown.

New Mexico. J. N. Crisler (August 17): The squash bug was noticed in great numbers in Dona Ana and Eddy Counties around the first of August, the heaviest infestation appearing in the lower end of the Mesilla Valley. These bugs have spread from the gardens to the tomato and maize fields and are doing serious damage.

ONIONSONION THRIPS (Thrips tabaci Lind.)

Michigan. R. Hutson (August 15): Thrips are very abundant on onions in all sections of the State. The losses on marshes around Gun Lake in

Allegan County are very great.

AN ONION APHID (Aphis allii Licht.)

Nebraska. M. H. Swenk (July 31): Some green onions in Lincoln County were reported infested with aphids on July 22.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elmore (August 20): Pepper weevil infestations increased rapidly and threaten heavy losses--25 to 50 percent--in Orange County. High temperatures have contributed to this condition.

SUGAR BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Idaho. J. R. Douglass (September 1): Temperatures below normal during the month of July have had a very favorable effect on the growth of sugar beets, and the development of the beet leafhopper and the activity of the curly-top disease have been retarded. At the end of July some of the larger beets exceeded 5 inches in diameter and weighed approximately 3 pounds. It is estimated that some of the fields in this section will yield 25 tons or more of sugar beets. The greater part of the beet acreage in this section is composed of the U. S. No. 1 resistant beets.

Utah. G. F. Knowlton (July 31): Approximately 50 percent of the tomato plants in Utah have now been killed or are seriously affected by curly top. Beet leafhoppers are now more abundant on tomatoes in southern areas than farther north. (August 25): Beet leafhoppers are abundant on Russian-thistle at Moab and Greenriver. Cantaloups and cucumbers are heavily infected with curly top in these two areas.

## COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis Boh.)

North Carolina. C. H. Brannon (August 27): Infestation heavy all over the State. Damage is serious in the upper Piedmont for the first time.

South Carolina. F. F. Bondy and C. F. Rainwater (August 3): In Florence County the boll weevil is steadily increasing in fruiting fields and in other fields movement is taking place. (August 17): Population gradually increasing. Many sections report the worst damage since 1929.

Georgia. O. I. Snapp (July 22): The boll weevil increased rapidly around Fort Valley as a result of frequent rains in July. The insect became very active the latter part of July. Fortunately, a cotton crop was made before August. On account of the activity of this insect, very few bolls matured in August in many fields.

Tennessee. G. M. Bentley (August 20): More common in the cotton-growing counties of western Tennessee this year than it has been for several years.

Louisiana. W. E. Hinds (August 12): The boll weevil is reported generally more abundant than in any preceding year.

R. C. Gaines (August 3): The average infestation in 14 untreated fields in Madison Parish was 60.3 percent, ranging from 8.8 to 88.8 percent.

Mississippi. C. Lyle (August 23): In the northern part of the State the boll weevil is still causing injury to plants that are fruiting.

R. W. Harned and assistants (August): On August 3 the infestation on 3 farms in Washington County ranged from 3.2 to 64.0 percent, averaging 45 percent. On August 3 in Oktibbeha County square infestation in 15 fields ranged from 5.3 to 77.7 percent, averaging 50.6 percent, as compared with 41.2 percent the previous week and 41.6 percent the same week in 1934. In Forrest County square infestation in 2 fields was 32.3 and 33.7 percent.

Arkansas. D. Isely (August 23): The threat of injury has practically passed in the greater part of the State, probably because of the summer drought.

Oklahoma. C. F. Stiles (August 6): The infestation decreased in the central part of the State and increased in the extreme southern part. A total of 43 fields were examined in 14 counties. The highest infestation was 65 percent in Choctaw County and the lowest was 1 percent in McClain County, with an average of 13.7 percent for the 43 fields. (August 21): The infestation for the week ended August 17 ranged from a high of 32 percent in Lincoln County to a low of 3.4 percent in Payne County.



Texas. R. W. Harned and assistants (August): On August 3 two untreated plats had infestations of 5.6 and 7.7 percent and two treated plats infestations of 1.2 and 1.7 percent in Brazos and Burleson Counties. (August 10): Untreated plats, 4.0 to 8.7 percent, average 6.0 percent; treated plats, 1.2 to 3.8 percent, average 2.2 percent, in Brazos and Burleson Counties. By August 10 infestations were increasing in Calhoun County. The damage is more or less spotted. In some fields, especially in young cotton, the infestation has increased to such an extent that the cotton has stopped blooming, although many squares are still present. (August 17): Infestation continues to increase. Damage is serious in most fields of young cotton.

COTTON LEAF WORM (Alabama argillacea Hbn.)

Maine. H. B. Peirson (August): A single moth was taken at bait on August 6 at Bar Harbor by A. E. Brower, an unusually early record.

Michigan. R. Hutson (August 26): The moth was reported from Hillsdale on August 23. This is the earliest record for several years.

North Carolina. C. H. Brannon (August 27): Severe infestation on cotton over the entire Piedmont.

South Carolina. F. F. Bondy and C. F. Rainwater (August 10): Moths caught in light traps and two larvae were found on August 8 at Florence. (August 17): No more larvae found.

Georgia. T. L. Bissell (September 3): The cotton leaf worm has appeared at Experiment. The first larvae were noted August 27. Today a large number of pupae were found.

Tennessee. G. M. Bentley (August 20): This insect made its first appearance in the State in Shelby County on August 5. Since that date it has spread into many of our western cotton-growing counties. On August 17 it was reported as being in Henry County. No reports have been received of its being in central Tennessee.

Missouri. L. Haseman (August 24): The cotton leaf worm began to attract attention in the southern Missouri cotton-growing district about August 15. By August 20 numbers of moths were present and were damaging ripe peaches at Columbia.

Arkansas. D. Isely (August 23): There is a widespread outbreak throughout eastern Arkansas. Infestations in the western part of the State are more scattered.

Mississippi. C. Lyle (August 23): Reported from most parts of the State during August. In the southeastern counties the damage caused was less than expected, probably because of parasites and predators. In the northwestern hill counties poison is being applied, whereas in the Delta section large areas have been dusted with airplanes.

Louisiana. W. E. Hinds (August 12): The cotton leaf worm has been reported from the following parishes: Madison, Caldwell, Franklin, Lafayette, and Vermilion. (August 21): Damage reported from over the entire State wherever cotton is grown. Impossible to get calcium arsenate.

Oklahoma. C. F. Stiles (August 6): Cotton leaf worms are lightly distributed over the State, with heaviest infestation in Jefferson, Love, Bryan, and Choctaw Counties. (August 21): Reported from practically all counties in the State. So far the damage has not been serious, except in a few instances. The moths of the first Oklahoma brood are now depositing their eggs.

Texas. D. M. McEachern (August 17): The cotton leaf worm made its appearance in the Presidio and Castolon sections of the Big Bend the last week in July. This is approximately a month earlier than the pest ordinarily appears. This insect also made its appearance in the irrigated section around Fort Stockton, in Pecos County, the second week in August. At this time damage is noticeable in the limited cotton acreage in this section.

F. L. Thomas (August 22): The fourth generation of adults since this insect first reached the State is now in full flight. This is the third generation to infest cotton at College Station and unprotected fields have been completely stripped of foliage.

K. P. Ewing and R. L. McGarr (August 3): Observations in the Corpus Christi and Robstown area last week end showed nearly all fields of mature cotton stripped. Observations in Refugio County yesterday showed some fields stripped and others protected. (August 10): Very heavy infestation this week covering half of Calhoun County. In many fields the heaviest infestation of the season occurred this week. Observations last Friday afternoon showed the leaf worm was getting out of control on a few farms in the county. (August 17): A few hundred acres of cotton in the county have been stripped or partially stripped.

New Mexico. J. N. Crisler (August 17): The first generation of the cotton leaf worm has pupated in the Mesilla Valley.

Arizona. T. P. Cassidy (August): The infestation in Arizona is so light that no commercial damage will result from the second generation. There is a remote possibility that an influx of moths from western Texas may cause damage.

#### BOLL WORM (Heliothis obsoleta Fab.)

Oklahoma. C. F. Stiles (August 21): Moths are present in large numbers in some fields. So far the damage has been light.

Texas. F. L. Thomas (August 22): Owing to hot, dry weather, the second-generation worms have failed to materialize, even where fairly large numbers of eggs had been laid.



R. W. Moreland and A. B. Beavers (August): In Brazos and Burleson Counties on August 3 examined 3,000 terminals and found 746 eggs, an average of 24.9. For the week ended August 4, 1934, the average was 1 egg per 100 terminals. On August 10 examined 2,700 terminals and found 2,853 eggs, an average of 105 eggs per 100 terminals.

New Mexico. D. M. McEachern (August 17): There is a light infestation in the Pecos Valley of New Mexico. Corn and cotton appear to be the only plants on which the worm is feeding.

Arizona. T. P. Cassidy (August 17): Causing some damage about 25 miles northwest of Tucson. The major damage is being caused to young bolls. Most of the larvae are about full grown.

#### PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. A. J. Chapman (August 17): Boll infestation records in several fields near Presidio averaged 30.8 percent. The heavily infested fields were located in the drought area above the Conchos River, where there is a limited cotton acreage.

#### COTTON SQUARE BORER (Styrmon melinus Hbn.)

Texas. D. M. McEachern (August 17): The cotton square borer has caused considerable damage to one field of cotton on the La Junta farm in the Presidio district of Texas.

#### COTTON APHID (Aphis gossypii Glov.)

North Carolina. C. H. Brannon (August 27): We have had several heavy infestations of the cotton aphid--some on dusted cotton, others on cotton that received no dust.

South Carolina. F. F. Bondy and C. F. Rainwater (August 3): Cotton aphid not so numerous at Florence as it was 2 weeks ago. (August 17): Aphids are on the bottom leaves in many fields.

Louisiana. W. E. Hinds (August 12): Cotton plant lice have appeared in abundance in numerous locations, especially where the dusting for boll weevils has been under way.

Texas. K. P. Ewing (August 17): In Calhoun County infestation is increasing rapidly in most fields that were dusted with calcium arsenate. The damage is severe in several fields.

#### COTTON FLEA HOPPER (Psallus seriatus Reut.)

South Carolina. F. F. Bondy and C. F. Rainwater (August 10): Green cotton at Florence has quite a number of flea hoppers but they do not seem to be doing any damage.



Oklahoma. C. F. Stiles (August 21): The cotton flea hopper has done enormous damage throughout the eastern half of the State since the last report. The injury is decreasing at present.

Texas. F. L. Thomas (August 22): Many complaints were received from northern Texas during July and the first part of August.

K. P. Ewing and R. L. McGarr (August 17): No damage in Calhoun County except in few fields of young cotton.

Arizona. T. P. Cassidy (August 17): Experimental cotton at Arend Ranch, Pima County, grown in the immediate proximity to croton plants that were heavily infested, has shown no indication of injury. Sweepings have been made weekly since July 1 with negative results. On August 8, 100 sweepings each were made in the cotton and croton. 59 hoppers were taken from croton and none from cotton.

#### RAPID PLANT BUG (Adelphocorus rapidus Say)

Texas. K. P. Ewing and R. L. McGarr (August 10): Heavy infestation and considerable damage observed in one field in Calhoun County. Adults and nymphs were brought into the office from Jackson County, where the insect is reported as the principal source of damage at the present time.

#### FALSE CHINCH BUG (Nysius ericae Schill.)

Oklahoma. F. A. Fenton (August 20): Reports were received from the southwestern part of the State of shedding of cotton squares caused by the false chinch bug.

#### A PENTATOMID (Chlorochroa uhleri Stahl)

Arizona. T. P. Cassidy (August 10): An intensive inspection was made in experimental cotton grown 25 miles southwest of Tucson on August 8. Six species of hemipterous insects were found. The relative abundance of C. uhleri and all other species was about 10 to 1. The shedding was confined almost entirely to young bolls. Examinations made of a number of plants showed that from 70 to 100 percent of the bolls had been injured by hemipterous insects. This is the heaviest injury of this kind ever noted here. C. uhleri seems to have migrated into the field from the desert.

#### COMMON RED SPIDER (Tetranychus telarius L.)

North Carolina. C. H. Brannon (August 27): Infestation severe on cotton in many sections of the State.

Mississippi. G. I. Worthington (August 23): More numerous on cotton in Bolivar Sunflower, and Washington Counties than for several years.

Arkansas. D. Isely (August 23): The red spider is causing more serious injury on cotton in eastern Arkansas than it has for a number of years.

## FOREST AND SHADE - TREE INSECTS

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

- Delaware. L. A. Stearns (July 24): Complaints received of infestation on arborvitae at Hockessin.
- North Carolina. R. W. Leiby (August 9): The bagworm is more injurious than usual on arborvitae all over the State.
- Ohio. T. H. Parks (August 23): Bagworms are still working on arborvitae and other ornamentals.
- Indiana. J. J. Davis (August 24): The bagworm has been very much more abundant than usual and as far north in the State as Kokomo and La Fayette.
- Illinois. W. P. Flint (August 22): These insects have been much more abundant and destructive than for any period in the last 6 or 7 years. They are now becoming full grown in central Illinois.
- Kentucky. M. L. Didlake (August 23): Bagworms on evergreens are very abundant at Lexington, Brooksville, Harlan, Anchorage, Baxter, and Hazard.
- Mississippi. C. Lyle (August 23): More than the usual number of complaints of bagworm injury to arborvitae and other shrubbery were reported from Aberdeen and Brookhaven. Specimens have also been received from Indianola and Shaw.
- Texas. F. L. Thomas (August 22): Bagworm found at Wharton, Belton, and College Station.

SATIN MOTH (Stilpnotia salicis L.)

- Washington. R. T. Webber (July): Infestations in residential sections outnumber those found in woodland. The principal woodland infestations lie between Everett and Bellingham and are centered about the tributaries of the Stillaguamish and Skagit Rivers. Here willow appears to be the most favored food plant. The largest single tract of practically complete defoliation noted is a few miles from Seattle in the Samish River Valley. This area consists of approximately 100 acres and the growth is chiefly willow. Other completely defoliated woodlands of an acre or more occur in Pierce and Cowlitz Counties. In these areas the native cottonwood (Populus trichocarpa) is the favored food plant.

A PSOCID (Cerastipsocus venosus Burm.)

- Tennessee. G. M. Bentley (June 18): In all my experience I have never seen so many psocids on the larger branches of trees as this year. We



find them on maples, oaks, yellow poplar, black walnut, and pecan. They occur in large masses, both winged and wingless forms. No injury is apparent. (Det. by A. M. Caudell.)

### BIRCH

#### A CASE BEARER (Coleophora salmani Heinr.)

Maine. H. B. Peirson (August): An outbreak of this species at Sorrento and Winter Harbor has turned the foliage brown. In places the larvae spread over to red oak and caused severe injury.

#### BRONZE BIRCH BORER (Agilus anxius Gory)

General. E. P. Felt (August 23): Trees injured by the bronze birch borer have been noted in southern Connecticut, in the vicinity of Pittsfield and Williamstown, Mass., in southern New York, and on Long Island.

### ELM

#### EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

New York. R. E. Horsey (August 3): A number of old and newly formed European elm scales were found on several trees of Zelkova serrata, a relative of the elm.

Ohio. E. W. Mendenhall (August 19): The European elm scale is abundant in some of the nurseries in central Ohio.

Wisconsin. E. L. Chambers (August 20): This scale has been discovered in six new localities this summer; previously known to be present in only three.

### FIR

#### AN APHID (Dreyfusia piceae Ratz.)

Maine. H. B. Peirson (August 10): Many firs are dying from attack by the fir or balsam woolly aphid at Belgrade, Dead River, Cadyville, Talmadge, and Waite.

### LARCH

#### LARCH SAWFLY (Lygaeonematus erichsonii Htg.)

Canada. J. C. Evenden (July): The forest-insect laboratory at Vernon, British Columbia, has recorded the presence of the eastern larch sawfly in the Flathead Basin, just north of the Canadian line. As in 1934, several outbreaks of a larch sawfly, determined as Hematinae, were recorded from adjacent territory in the United States, it is very possible that the insects on both sides are of the same species. The present outbreaks have not as yet reached serious proportions and have caused no irrecoverable damage.



Montana. F. C. Craighead (August 31): The larch sawfly has been found causing serious damage to larch in northern Montana. The insect has not been previously recorded west of the Mississippi.

### LOCUST

#### LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

North Carolina. B. H. Wilford (August 15): A report came to the office yesterday concerning severe injury to the foliage of black locust by the locust leaf miner near Barnardsville.

Virginia. M. W. Blackman (August 16): B. H. Wilford reported on July 29 that during the past week several reports have been received of severe leaf-miner injury to black locusts east of Abingdon. Most of the leaves appear reddish brown.

### MAPLE

#### A GEOMETRID (Physostegania pustularia Guen.)

Connecticut. W. E. Britton (August 22): Adults very abundant and swarmed around lights in Waterbury in July; also more common than usual in New Haven. The larvae feed on maple.

### OAK

#### OAK PILL GALL (Cincticornia pilulae Walsh)

New York. E. P. Felt (August 23): The oak pill gall was found to be unusually abundant on a number of oaks at Tuxedo. The foliage of the lower branches was thickly infested.

### PLANETREE

#### SYCAMORE LACEBUG (Corythucha ciliata Say)

New York. E. P. Felt (August 23): Work of the sycamore lace bug was observed on several American planetrees in and about Tuxedo and Suffern. The insect is most abundant on trees growing in weedy and shrubby localities along streams.

Kentucky. M. L. Didlake (August 23): Lacebug injuring sycamore at Lexington.

### POPLAR

#### POPLAR LEAF STEM GALL (Pemphigus populi-transversus Riley)

Texas. F. L. Thomas (August 22): Galls on cottonwood trees were sent in from Jackson County on August 1. These galls have not been conspicuous

for several years and may indicate a recurrence of injury to the turnips and cabbages grown in this area during the winter.

### SPRUCE

#### WHITE SPRUCE SAWFLY (Neodiprion polytomum Htg.)

New England. J. V. Schaffner, Jr. (August 26): Recent surveys of spruce forests in Maine, New Hampshire, and Vermont have disclosed that this sawfly is firmly established in New England. Light infestations, covering several square miles, have been located in Maine in the northern part of Aroostook County, about 30 miles south of Fort Kent, and in Somerset County, north of Moosehead Lake. In New Hampshire light infestations were found at First Connecticut Lake and south as far as Campton. It seems to be generally distributed all over the White Mountains. In Vermont infestations were found from Newport to Stowe. Although the infestations in each case have been reported light, the sawfly is present in sufficient numbers and is distributed over such a wide area as to cause considerable alarm. The larvae were found feeding on both white and red spruce.

### WALNUT

#### WALNUT CATERPILLAR (Datana integerrima G. & R.)

Ohio. E. W. Mendenhall (August 20): Caterpillars are damaging black walnut trees and some trees are nearly defoliated.

Illinois. C. L. Metcalf (August 19): The walnut caterpillar has extensively defoliated trees in the vicinity of Urbana, many trees being from half defoliated to almost completely so.

Wisconsin. E. L. Chambers (August 20): Walnut trees throughout southern Wisconsin have been defoliated during the past 10 days.

### WILLOW

#### EUROPEAN WILLOW BEETLE (Plagiodera versicolora Laich.)

New England and New York. J. V. Schaffner, Jr. (August 26): Recently noted as far north in Vermont as Vergennes, and in New York in vicinity of Troy, Grafton, Fonda, and west to Little Falls. In Maine it has been found as far north as Biddeford.

Connecticut. M. P. Zappe (August 22): Has been very abundant in southwestern Connecticut for several years, causing considerable defoliation of willows. This year the insect is very scarce and many willows are entirely free from infestation.

# INSECTS AFFECTING GREENHOUSE AND ORNAMENTAL PLANTS

## A WEEVIL (Calomycterus setarius Roelofs)

Connecticut. W. E. Britton (August 22): Specimens of this weevil have just been received from Stratford, in Fairfield County, just east of Bridgeport.

## CHINESE MANTIS (Tenodera sinensis Sauss.)

Ohio. J. S. Houser (August 24): This is the first time I have received specimens of the Chinese mantid from the extreme southwestern part of Ohio. I have taken it once before in the State, in a nursery near Wooster.

## AZALEA

### AZALEA LACEBUG (Stephanitis pyrioides Scott)

New York. E. P. Felt (August 23): The azalea lacebug was reported as injurious to azalea in the White Plains district.

## DAHLIA

### SUNFLOWER WEEVIL (Rhodobaenus tredecimpunctatus Ill.)

Illinois. C. L. Metcalf (August 19): We have been receiving reports of serious destruction of dahlias by the sunflower beetle, or cocklebur billbug, from the Chicago and north-shore district and also from the extreme southern part of the State, in Alexander County. The first reports from the southern part of the State were dated August 9 and those from Chicago, August 13. Specimens received are apparently in the full-grown larval stage. One grower reported that 4 acres of dahlias were beginning to die down as a result of this attack. Another writes that the damage is very extensive, many plantings being ruined just as the plants are beginning to bloom. All report that this is the first time they have had trouble with a borer in dahlias. In one instance the injured plants were accompanied by a diseased condition designated as "stunt."

## DEODAR

### DEODAR WEEVIL (Pissodes deodarae Hopk.)

North Carolina. R. W. Leiby (August 9): Severe damage is being done to deodar cedar trees. It is greater this season than usual.



GLADIOLUSGLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Ohio. E. W. Mendenhall (August 9): The gladiolus thrips is very injurious in gladioli plantings in Newark and Zanesville and this pest seems to be spreading over the State.

Indiana. J. J. Davis (August 19): The gladiolus thrips is destructive to gladiolus flowers at Hammond.

Michigan. R. Hutson (August 15): Extremely abundant in gladiolus fields about Lansing.

Oregon. D. C. Mote (August): Generally not so abundant as last year, although the injury is severe in some gardens.

IRISIRIS BORER (Macronoctua onusta Grote)

Indiana. J. J. Davis (August 24): The iris borer was noticeably destructive at La Fayette and Logansport early in August.

MAGNOLIAMAGNOLIA SCALE (Neolecanium cornuparvum Thro)

New York. R. E. Horsey (August): Full-grown scales, very conspicuous with the white covering now present, are to be seen on the twigs and branches of Magnolia kobus borealis and M. acuminata, both large trees. Also reported on many different magnolias in all parts of Rochester. On August 19 the scales were full of live and active young. On August 20 they were emerging and young were numerous on the branches. A serious pest at Rochester since 1925.

E. P. Felt (August 23): The magnolia scale was found in some numbers on Virginia creeper at Bronxville.

Kentucky. M. L. Didlake (August 23): Magnolia scale on M. soulangeana at Barbourville.

# INSECTS ATTACKING MAN AND DOMESTIC ANIMALS

## MAN

### MOSQUITOES (*Culicinae*)

Vermont. H. L. Bailey (August 23): Mosquitoes reported in extreme abundance from the vicinity of Lake Dunmore, in Addison County. Recreational activities were seriously restricted and many campers were reported as leaving. This condition came on suddenly late in July and subsided gradually during the first 2 weeks in August.

New York. E. C. Cushing (August 27): The recent floods occurring in southern and central New York State have brought about ideal conditions for the production of enormous numbers of the floodwater mosquito (*Aedes hirsuteron* Theob.) and the common swamp mosquito (*A. vexans* Meig.).

Florida. W. V. King (August 27): With heavy rainfall throughout the State during June and July, severe infestations of salt-marsh mosquitoes, principally *A. taeniorhynchus* Wied., were reported from nearly all sections of the coast.

### SADDLE-BACK CATERPILLAR (*Sibine stimulea* Clem.)

Ohio. J. S. Houser (August 24): The saddle-back caterpillar is much more plentiful this season than usual. Ordinarily the caterpillars occur singly, but this season goldenglow is reported as having been almost defoliated. Their feeding has also damaged corn leaves.

Indiana. J. J. Davis (August 24): Saddle-back caterpillars were reported from Warsaw as abundant in pear on August 20 and causing considerable irritation.

### PUSS CATERPILLAR (*Megalopyge opercularis* S. & A.)

North Carolina. C. H. Brannon (August 26): According to a physician's report, the sting of the puss caterpillar was almost fatal to a patient in Cabarrus County.

### BLOOD-SUCKING CONENOSE (*Triatoma sanguisuga* Lec.)

Florida. E. W. Berger and G. B. Merrill (August 22): A correspondent at Clarksville writes: "Myself and a friend have undergone much suffering and apparently have narrowly escaped death after being bitten or stung."

### WHEEL BUG (*Arilus cristatus* L.)

Kentucky. M. L. Didlake (August 23): Wheel bug at Lexington. It had inflicted a wound when caught in a boy's clothing.



### WEEVILS (Brachyrhinus spp.)

Maine. H. B. Peirson (August 1935): Strawberry crown girdler (B. ovatus L.) found on August 8 at Bailey's Island and Guilford. Many adults coming into houses.

Vermont. H. L. Bailey (August 23): Black vine weevil (B. sulcatus Fab.) reported in great abundance in old house at Danville.

Washington. M. H. Hatch (August 6): Numerous reports have come in of the strawberry root weevil (B. ovatus) occurring in houses and cabins in various parts of western Washington this summer.

### FLEAS (Otenocephalides spp.)

Ohio. T. H. Parks (August 23): Cat fleas (C. felis Bouche) and dog fleas (C. canis Curt.) are very troublesome this year. Some houses are overrun by them and lawns are also well populated.

Indiana. J. J. Davis (August 24): Fleas have been unusually prevalent according to the many reports from all sections of the State.

### BLACK WIDOW SPIDER (Latrodectus mactans Fab.)

Virginia. W. J. Schoene (August 23): Black widow spiders are being brought in frequently from various sections of the State.

North Carolina. R. W. Leiby (August 9): Owing probably to recent publicity in the State, specimens are being sent to the office more frequently than usual. Records of bites usually accompany them.

Georgia. O. I. Snapp (July 30): Many inquiries being received constantly.

T. L. Bissell (August 3): Nine spiders, males and females, were found in the corners of insect cages with open bottoms placed on the ground. There has been an increase in such finds during the past 2 or 3 years. Several cases of humans who had been bitten by these spiders have been treated in Atlanta hospitals, at least one case being fatal this year.

Florida. E. W. Berger and G. W. Merrill (August 22): A correspondent speaks of the unusually large number of black widow spiders. Several people had been bitten and made very ill, suffering greatly.

Kentucky. M. L. Didlake (August 23): Black widow spiders at Krupp and Pineville.

Tennessee. G. M. Bentley (August 20): Owing to press articles in regard to the black widow spider and reports of people suffering from its bites, Tennessee is black widow spider minded at this time. Scores of specimens have been brought into the office.



North Dakota. J. A. Munro (August 21): Specimens were collected at Fargo on July 23 and August 21, and were sent in from Slope County on August 21.

Nebraska. H. H. Svenk (July 31): On July 25 in Nance County a specimen was found. A report from Adams County was received on July 27.

Oklahoma. F. A. Fenton (August 20): Several requests for information on the black widow spider have been received, also specimens.

Utah. G. F. Knowlton (August 24): A black widow spider was found in an occupied hotel room at Moab.

#### A TICK (Dermacentor variabilis Say)

Iowa. R. W. Wells (July 29): Incidence of Rocky Mountain spotted fever: "Thus far in 1935, four cases of Rocky Mountain spotted fever have been reported to the Iowa State Department of Health. The counties concerned are Linn, Lee, Poweshiek, and Union, and are widely separated in the southern half of the State. The first case, that of a little girl in Linn County, resulted fatally."--Iowa State Health Dept. Weekly Health Message, July 29, 1935.

#### CATTLE

##### SCREW WORMS (Cochliomyia spp.)

Southern States. E. C. Cushing (August 27): In the Southeastern States screw worms have caused little trouble; in comparison with many districts in other parts of the United States. The degree of infestation reported for the seven States concerned for the week ended July 27 is summarized as follows:

State	: Counties :	Animals :	Screw worm :	Infestation
	: infested :	examined :	infestations :	
	: Number :	Number :	Number :	Percent
Mississippi-----	: 12 :	123,827 :	26 :	0.02
Georgia-----	: 83 :	59,579 :	2,324 :	3.90
South Carolina-----	: 10 :	6,408 :	29 :	.45
Louisiana-----	: 14 :	91,254 :	251 :	.28
Alabama-----	: 27 :	178,840 :	148 :	.08
Florida-----	: 48 :	193,119 :	6,548 :	3.98
Southeastern Texas---	: 19 :	37,554 :	592 :	1.56

In southwestern Texas ranchmen have reported that there has been little decrease in numbers of infestations during the last few weeks. Unusual amounts of rainfall, which necessitated late shearing, were probably responsible for a large number of these cases. Favorable weather conditions caused a prolongation of the usual season of the wool maggot fly (Phormia regina Meig.) and the infestations caused by

this species brought on attacks of the screw worm fly. Ranchmen in California and in southern Oklahoma report recent severe outbreaks of screw worm flies.

Oklahoma. O. G. Babcock and C. F. Stiles (August 30): The screw worm has been exceptionally abundant and destructive in western Oklahoma. In Carter, Jefferson, and Love Counties the average infestation of live-stock was reported to have reached 25 percent during the season. The infestation was less intense in the northern part of the State and ceased near the Kansas line.

New Mexico. W. B. Rogers (August 29): I learned from ranchers around Roswell that screw worms have been very prevalent there this season. Infestations as high as 90 percent were reported in some instances.

#### STABLE FLY (Stomoxys calcitrans L.)

Florida. W. V. King (August 27): An investigation along the beach in the vicinity of Panama City on July 24 to 26 showed that there was very little accumulation of Sargassum, a kind of brown marine algae. Decaying piles of these plants were prolific stable fly breeding places last fall. No adult flies were noted on or near the beach at the time the investigations were made this year.

Missouri. L. Haseman (August 24): The stable fly has been abundant during August.

#### EYE GNATS (Hippelates spp.)

Mississippi. J. P. Kislanko (August 19): Eye gnats have been quite annoying in several southern counties for several weeks.

#### HORSES

##### HORSE FLIES (Tabanus spp.)

Missouri. L. Haseman (August 24): During the first half of the month horse flies continued to be abundant, although by August 20 they were becoming less troublesome.

Nebraska. M. H. Swenk (July 31): The lined horse fly (T. lineola Fab.) was reported as troublesome in Thurston County on July 19.

##### HORSE BOTFLIES (Gastrophilus spp.)

Iowa. R. W. Wells (August 27): G. intestinalis DeG. began ovipositing on laboratory horses at Ames on July 6. They have been very scarce, however, and not more than 50 or 60 eggs had accumulated on laboratory horses by July 31. Oviposition by G. nasalis L. was first observed on

July 1, about 3 weeks later than usual. The activity continued moderately for 4 or 5 days and was not observed after July 10. G. haemorrhoidalis L. was reported to be active at Ames during the first half of July.

North Dakota. J. A. Munro (August 21): Horse botflies continue to be troublesome over most of the State.

#### POULTRY

##### STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Oklahoma. F. A. Fenton (August 20): The sticktight flea was reported as injurious to poultry in one locality.